nonylaldehyde, also known as 1-nonanal or pelargonaldehyde, and n-decylaldehyde, also known as decanal, are commercially available from Aldrich, Milwaukee, WI. It will be appreciated, however, that the N-alkyl-DNJ used in this combination drug therapy is not limited to any particular method of synthesis of the N-butyl-DNJ, N-nonyl-DNJ, N-decyl-DNJ, or other N-alkyl derivatives of DNJ.

The glucocerebrosidase used in the combination drug therapy also is a known drug as described above. For example, it can be derived from human placental tissue by conventional isolation and purification techniques or prepared by recombinant DNA procedures. Conventional methods of isolation and purification from human placental tissue are described by Dale and Beutler, Proc. Natl. Acad. Sci. USA 73, 4672-4674 (1976) and in U.S. Pat. No. 3,910,822. Suitable methods of production by recombinant DNA are described in U.S. Pat. Nos. 5,236,838, 5,549,892 and 5,879,680. The glucocerebrosidase can also be conjugated with carrier molecules such as, for example, polyethylene glycol (PEG) as described in U.S. Pat. Nos. 5,705,153 and 5,620,884. It will be appreciated, however, that the glucocerebrosidase used in the combination drug therapy is not limited to any particular method of production.

a'

The N-butyl-DNJ, N-nonyl-DNJ, N-decyl-DNJ, and other N-alkyl derivatives of DNJ, can be used for treatment of patients afflicted with Gaucher's disease and other glycolipid storage diseases by conventional methods of administering therapeutic drugs. Thus, the active compound is preferably formulated with pharmaceutically acceptable diluents and carriers. The active drug can be used in the free amine form or the salt form. Pharmaceutically acceptable salt forms are illustrated, e.g., by the HCl salt. The amount of the active drug to be administered must be an effective amount, that is, an amount which is medically beneficial against Gaucher's disease or other glycolipid storage disease but does not present adverse toxic effects which overweigh the advantages that accompany its use.

However, in the presence of NB-DNJ the half life was extended, indicating that inhibitor protects enzyme from inactivation or reduces clearance by receptor mediated uptake (Friedman, et al., id, 1999).

a2 The foregoing data thus suggest that the pharmacological profile of β-glucocerebrosidase would not be compromised in the presence of low concentrations of NB-DNJ, but can show improvement.

Various other examples will be apparent to the person skilled in the art after reading the present disclosure without departing from the spirit and scope of the invention. It is intended that all such other examples be included within the scope of the appended claims.

Clear copies and marked-up copies of pages 7 and 16 as thus amended are attached hereto.

IN THE CLAIMS:

Please amend Claims 1 to 9, by re-writing as follows:

--1. [The method of treating a patient affected with a glycolipid storage disease comprising administering to said patient both] A use of a combination of a N-alkyl derivative of deoxynojirimycin (DNJ) having from [about] two to [about] twenty carbon atoms in the alkyl chain and a glucocerebrosidase enzyme for the preparation of a medicament [in an amount effective] for alleviating or inhibiting [said] a glycolipid storage disease. - -

--2. The [method] use of Claim 1 [in which] wherein the N-alkyl derivative of deoxynojirimycin contains four to six carbon atoms in the alkyl chain. - -

--3. The [method] use of Claim 2 [in which] wherein the N-alkyl derivative of deoxynojirimycin is N-butyl-DNJ. - -

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--4. The [method] use of Claim 1 [in which] wherein the N-alkyl derivative of deoxynojirimycin is N-nonyl-DJN or N-decyl DNJ. - -

--5. The [method] use of Claim 4 [in which] wherein the N-alkyl derivative of deoxynojirimycin is N-nonyl-DNJ. - -

--6. The [method] use of Claim 1 [in which] wherein the glycolipid storage disease [in] is Gaucher's disease. - -

--7. The [method] use of Claim 3 [in which] wherein the glycolipid storage disease [in] is Gaucher's disease. - -